# National Weather Service

## FY 2001 President's Budget Overview

Total Request: $ 710,232,000
ORF: $634,872,000
PAC: $ 75,360,000

**Mission**

The National Weather Service (NWS) provides weather, water, and climate forecasts and warnings for the United States, its territories, adjacent waters, and ocean areas for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community.

**Introduction**

America's vulnerability to weather related hazards is rising as more of the population moves into weather harm's way and national and global economies become more complex. Approximately 40 percent of all Americans, some 100 million people, currently reside in areas of high risk to natural disasters, with the number climbing yearly. Today, 90 percent of all presidentially declared disasters are weather and flood related. Moreover, water resources are the lifeblood of the economy and our standard of living. During the next century, weather will continue to impact our lives and significantly impact the U.S economy. In recognition of this fact, the NWS was recognized by National Partnership for Reinventing Government (NPR) as one of thirty two high impact federal agencies. By working with our partners, especially the private sector and emergency management community, NWS is striving to ensure our products and services are responsive to the needs of the American public.

The FY 2001 President's Budget Request supports the funding and program requirements to enable the NWS to better use science to serve our citizens and fulfill its vision of becoming

America's "no surprise" weather service. This vision states that the NWS will produce and deliver forecasts you can trust when you need them most, use cutting-edge technologies, provide services in a cost-effective manner, strive to eliminate weather related fatalities, and improve the economic value of weather information. In FY 2001, the NWS will continue its mission of providing weather and flood warnings and forecasts to the public and improve the overall warning lead times for tornadoes, severe thunderstorms, and flash floods, as well as improve the accuracy of hurricane landfall predictions.

The NWS contributes to three of NOAA's Strategic Plan goals; Advance Short-Term Warning and Forecast Services, Implement Seasonal to Interannual Climate Forecasts, and Predict and Assess Decadal to Centennial Change. The NWS request also supports investments in the Natural Disaster Reduction Initiative (NDRI) as well as the NOAA Climate Observations and Services Initiative.

**Budget Overview**

Overall, the NOAA request includes a total of $710.2 million for the National Weather Service, a net increase of $56.3 million above the FY 2000 appropriation. The request includes a total of $634.9 million for Operations, Research, and Facilities (OR&F) and $75.4 million for Procurement and Acquisition and Construction (PAC). In FY 2001, the budget priorities for NWS include sustaining current services, replacing obsolete observing systems, infusing new technology, and enhancing service to the Public.

**Operations, Research, and Facilities** - The FY 2001 President's Budget includes a request of $634.9 million, an increase of $33.5 million over the FY 2000 appropriation. The increase allows NWS to maintain current services in FY 2001. Specifically, the increase of $33.5 million includes $16.0 million for Mandatory Pay Raises and Inflationary Costs, $8.4 million to Sustain Base Operations, $2.0 million for Weather Forecast Office (WFO) Maintenance, $2.3 million to Sustain the Co-Operative Observer (COOP) Network, $5.8 million for Advanced Weather Interactive Processing System (AWIPS) Operations and Maintenance(O&M), -$.4 million for NEXRAD Operations and Maintenance, and -$.8M for one-time program terminations. The specific details are outlined below:

**Mandatory Pay and Inflationary Costs (+$16.0M)** - NOAA requests an increase of $16.0 million to fund Adjustments to Base (ATBs) for NWS. The increase will fund the FY 2001 federal pay raise of 3.9% and annualize the FY 2000 pay raise of 4.8% as well as provide inflationary increases for certain non-labor activities, including service contracts, field office lease payments, and rent charges from the General Services Administration (GSA).

**Sustain NWS Base Operations (+$8.4M) -** NOAA requests an increase of $8.4 million to support NWS field office operations and maintain current services in FY 2001. The $8.4 million increase includes the following critical base activities:

- **Continue Weather Service Office Operations (+$.9M)** - Funding is required to sustain operations at certain Weather Services Offices previously slated for closure. These offices include Ft. Smith, Arkansas; Huntsville, Alabama; Williston, North Dakota; and Erie, Pennsylvania. The offices will remain open until all necessary follow-on studies are completed and the Secretary of Commerce makes a final decision on each closure action.

- **Provide FAA/ASOS Augmentation (+$1.8M) -** To comply with the FAA Observation and Aviation Service Standards, NWS is required to perform manual weather observations to augment and backup ASOS observations at certain airports across the Nation. Due to staff reductions achieved under the NWS Modernization, the workload associated with ASOS augmentation cannot be absorbed by the current NWS field office staff. The $1.8 million will provide the necessary contract support to perform the function at 17 sites.

- **Sustain NOAA Weather Radio Network (NWR) (+$3.0M)** - NWS requires funding to operate and maintain 110 NWR transmitters which will be added to the network in FY 2000 and FY 2001. Current partnership agreements require the NWS to operate and maintain transmitters purchased by states and localities, the private sector, and the federal government. The NWR network is a critical for transmitting NWS warning and forecast messages to the public, providing advance notice for severe weather events.

- **Provide Network Security (+$.8M)** - NWS requires funding to procure and install emergency network security hardware at the National Centers for Environmental Prediction (NCEP). The security system will prevent service interruptions from cyber and hacker attacks. NCEP receives over 25 hacker attacks per week and the number is doubling every 3 months.

- **Ensure Workplace Safety (+$.7M)** - NWS requires funding to replace replacing unsafe hydrogen generators which are used to inflate weather balloons at field offices in Alaska. Currently, the generators present a significant safety risk to NWS employees.

- **Sustain Field Observations (+$1.2M) -** NWS requires funding in FY 2001 to sustain its current suite of surface observation equipment which are critical for local weather and flood forecasting. To avoid catastrophic loss of data, NWS is planning to replace surface data collectors used to report observations from stream gages, river gages, and remote weather observation stations.

**Weather Forecast Office (WFO) Maintenance & Repair (+$2.0M) -** NWS requests an increase of $2.0 million for WFO Maintenance & Repair. This will allow NWS to fund recurring maintenance contracts and address a backlog of over $7.0 million in deferred maintenance actions. WFOs require a significant investment in recurring and cyclic maintenance, including replacement of major facility support systems such as power backup and heating, ventilation, and air conditioning (HVAC). The request will allow NWS to protect the $250 million capital investment in modernized facilities in accordance with GSA and private industry standards.

In FY 2001, NWS will complete  high priority repair actions at 20 field offices.

**Cooperative Observer Network (+$2.3M)**- NOAA requests an increase of $2.3 million to sustain the Nation's cooperative observer network.  The cooperative observer network is a nationwide network of over 11,000 volunteer operated weather observing sites used by NOAA to maintain the Nation's climate record and to provide data to local NWS field offices.  In a recent report, the National Research Council recommended that NOAA take immediate steps to sustain and modernize this critical network.  The instruments used to detect daily minimum and maximum temperatures as well as rain gage recording devices for measuring precipitation are virtually obsolete and increasing costly to maintain.  In FY 2001, NWS plans to begin a five-year program to modernize the entire current network.  The $2.3 million will allow NWS to replace 900 rain gages and 200 temperature sensors in FY 2001.

**Advanced Hydrologic Prediction System (AHPS)** - In FY 2001, NOAA will also continue implementation of AHPS in the Mississippi and Ohio River Basin, focusing on high priority flood prone areas.  The OR&F request includes a total of $1 million for this critical service improvement program.  Once deployed, AHPS will significantly improve flood forecasting and water resource management by extending river stage forecasts from days to months in the future. AHPS will also provide new river forecast information which can be used by water resource and emergency managers for risk based decision making.  AHPS will save lives and provide over $600 million in annual savings to the U.S. economy.

**Next Generation Weather Radar (NEXRAD) Operations & Maintenance (-$0.4M)** - NOAA requests a decrease of $.4 million to provide recurring operations and maintenance for the current NWS network of 123 NEXRAD units.  The NEXRAD network provides nationwide Doppler radar coverage, improving detection of severe weather and floods and increasing the warning lead time for tornadoes. This level of funding will provide for logistics, utilities, and system maintenance to ensure the operational availability of the NEXRAD network.

**Advanced Weather Interactive Processing System (AWIPS) Operations & Maintenance (+$5.8M)** - NOAA requests an increase of $5.8 million to provide recurring operations and maintenance for the fully deployed network of 152 AWIPS systems.  FY 2001, funding is required to address recurring communications, systems obsolescence, and hardware maintenance support costs associated with build 4.2 operations.

**Automated Surface Observing System (ASOS) (+$0.02M)** - NOAA requests an increase of $.02 million to operate and maintain the NWS network of 314 ASOS units.  ASOS provides the weather forecaster with critical surface observations to improve weather warning and forecast services.  ASOS also provides critical data to support the aviation community and climate information users.

**Procurement, Acquisition and Construction (PAC)** As indicated above, the NOAA request includes a total of $75.4 million for NWS PAC programs, an increase of $19.8 million over the FY 2000 appropriation. The specific requests are listed below.

**NEXRAD (+$1.3M)** - NOAA requests increase of $1.3 million over the FY 2000 appropriation. In FY 2001, NWS will continue product improvement efforts by infusing new technology into the current NEXRAD radar network. The current system processor utilizes obsolete technology developed in the late 1980s. As a result, a number of new detection techniques, that are ready for operational use, cannot run on the present system. Combined with AWIPS build 5.0 technology, the NPI will allow NWS forecasters to improve the tornado warning lead time by 5 minutes (11 minutes to 16 minutes) and improve the accuracy of severe storm forecasts by over 20%. In FY 2001, the NWS will complete hardware retrofits on a total of 50 NEXRAD radars.

**ASOS (+$1.3M)** - NOAA requests an increase of $1.3 million over the FY 2000. In FY 2001, NWS will continue product improvement efforts, testing and deploying new sensor capabilities. Specifically, NWS will replace obsolete processors on 250 ASOS systems and continue replacement of the all weather rain gage and ice free wind sensor which are critical to Aviation users.

**AWIPS (+$1.4M)** - NOAA increase of $1.4 million over the FY 2000 appropriation. In FY 2001, NWS will complete the 2nd of a 3 year effort to develop and deploy AWIPS build 5.0 software. Combined with NEXRAD Product Improvement technology, AWIPS build 5.0 software will allow NWS forecasters to improve the tornado warning lead time by 5 minutes (11 minutes to 16 minutes) and improve the accuracy of severe storm forecasts by over 20%. The NOAA request also includes funding to provide a backup Network Control Facility (NCF).

**Central Computer Facility (+$4.0M)** - NOAA requests an increase of $4.0 million over the FY 2000 appropriation. The increase includes $2.0 million to operate and maintain the Class VIII supercomputer which is currently located on the Census Facility in Bowie, Maryland. The increase is necessary to provide required operations and maintenance as well as provide the necessary communications infrastructure to support the Class VIII. The increase also includes $2.0 million obtain computing resources to improve and expand operational climate forecasts. In FY 2001, NWS is proposing to expand the current Climate Threats ( Drought, Fire, Flooding) Assessment and Extreme Heat Index from 14 days to 3 months. In addition, NWS utilize additional computing capacity to improve forecasts for El Niño, La Niña Events, and other climate oscillations.

**Evansville, Indiana mitigation (+$5.5M) -** NOAA requests an increase of $5.5 million to acquire, deploy, and install an Doppler weather radar for the Evansville, IN. In FY 1999, the Modernization Transition Committee (MTC) recognized a gap in radar coverage for Southern Indiana and Illinois. The MTC requested the NWS develop an action plan to address this issue before the closure certification could be finalized for the Evansville Weather Service Office.

**Radiosonde Replacement Network** - NOAA will continue the replacement and modernization of the upper air radiosonde network. The PAC request includes a total of $7.0 million for this activity in FY 2001. The radiosonde network provides critical upper air observations which are the principal data source for all weather forecasts. These funds will enable NWS to exercise the first option year of the replacement systems contract to begin full deployment of the ground receiving stations, replace the remaining IBM XT microcomputers with modern PCs, continue software development, and procure surface instruments that will provide ground based measurements at the point of balloon release.

**NOAA Weather Radio (NWR) (+$6.2M) -** NOAA requests an increase of $6.2 million to upgrade and expand the NWR network to meet the Vice President's Goal of 95% coverage for the U.S. population. The NWR network is the sole government owned and operated radio network for the direct broadcast of weather warnings and forecasts, and other hazard information to the public. In FY 2001, NWS proposes to install 30 new transmitters at high priority sites across the Country. In addition, NWS proposes a one time investment of $1.7 million to improve the current NWR voice transmissions.

**NWS Weather Forecast Office (WFO) Construction** - Within the overall PAC request, NOAA requests a total amount of $9.5 million to continue this critical facilities modernization program. In FY 2001, NWS will finalize construction activities for the new weather office in Caribou, Maine and Key West Florida. In addition, NWS will continue efforts to modernize the current Alaska Tsunami Warning Center as well as replace employee housing in St. Paul, Alaska.

F:\OMWeb\reachout\fy2001\BLUEBNWS.WPD
February 7, 2000 (4:29PM)